

REMARKS

Reconsideration and allowance of the application are respectfully requested in light of the above amendments and the following remarks.

Claims 2-5 have been rewritten in independent form to include the features of claim 1, and claim 1 has been canceled. Claim 9 has been amended to include features recited in claim 5.

Claims 1, 4-6, and 8-11 were rejected, under 35 USC §102(b), as being anticipated by Voyer (US 2001/0027112). Claims 2 and 3 were rejected, under 35 USC §103(a), as being unpatentable over Voyer in view of Nakano et al. (US 5,933,782). Claim 7 stands rejected, under 35 USC §103(a), as being unpatentable over Voyer in view of Kumar et al. (US 6,434,367). The Applicants respectfully traverse.

Claims 2 and 3

It is submitted that claims 2 and 3 are allowable over the individual or combined teachings of Voyer and Nakano et al. for the reasons set forth below.

Nakano's Fig. 8 suggests transmitting layer-1 control signals in short time intervals and layer-3 control signals in long time intervals from a mobile station to a base station. That is, Nakano suggests that the transmission interval for the

layer-3 control signals is longer than the transmission interval for the layer-1 control signals.

Nakano's Fig. 9 suggests that the number of times the layer-3 control signal is transmitted is smaller than the number of times the layer-1 control signal is transmitted. According to Nakano, the layer-1 control signal is terminated between the mobile station and the base station and is not combined at an exchange station during a site diversity period (see Nakano col. 5, lines 37-41) and the layer-3 control signal is terminated between the mobile station and the base station control station and is combined at the exchange station during the site diversity period (see col. 5, lines 46-50). Furthermore, Nakano discloses using the layer-1 control signal in transmission power control during a non-site diversity period and using the layer-3 control signal in transmission power control during the site diversity period.

However, Nakano does not disclose or suggest using the layer-1 control signal or layer-3 control signal in transmission power control of a downlink common channel. Nakano's layer-1 control signal is used in transmission power control of a downlink dedicated channel during the non-site diversity period and the layer-3 control signal is used in transmission power control of the downlink dedicated channel during the site

diversity period. Thus, both the layer-1 control signal and layer-3 control signal are used in transmission power control of the downlink dedicated channel. That is, Nakano does not disclose or suggest using either the layer-1 control signal or the layer-3 control signal in transmission power control of a downlink common channel and using the other in transmission power control of the downlink dedicated channel, as recited in claims 2 and 3. Voyer is not cited for supplementing the teachings of Nakano in this regard.

Moreover, claim 2 recites that the transmission interval of a TPC command for the downlink common channel (i.e., the claimed first TPC command) is longer than the transmission interval of a TPC command for the downlink dedicated channel (i.e., the claimed second TPC command). Claim 3 recites that the number of times the TPC command for the downlink common channel (i.e., the claimed first TPC command) is transmitted is smaller than the number of times the TPC command for the downlink dedicated channel (i.e., the claimed second TPC command) is transmitted. Voyer and Nakano do not suggest these features.

Accordingly, the Applicants submit that Voyer and Nakano, considered individually or in combination, do not render obvious the subject matter of claims 2 and 3. Therefore, allowance of claims 2 and 3 is warranted.

Claim 4

It is submitted that claim 4 is distinguishable over Voyer for the reasons set forth below.

Voyer discloses, in paragraph [0002], a base station that transmits a composite signal having signals respectively dedicated to individual mobile stations and signals intended for all the mobile stations. That is, Voyer suggests transmitting, in a downlink from the base station to the mobile station, a downlink dedicated channel signal and a downlink common channel signal at the same time.

However, Voyer does not disclose or suggest the feature recited in claim 4 of, in an uplink from a mobile station to a base station, transmitting both a TPC command for a downlink common dedicated channel (i.e., the claimed first TPC command) and a TPC command for a downlink dedicated channel (i.e., the claimed second TPC command) in the same time slot. That is, Voyer does not disclose or suggest that one mobile station transmits two different TPC commands in the same time slot.

Accordingly, the Applicants submit that Voyer does not anticipate the subject matter of claim 4. Therefore, allowance of claim 4 is warranted.

Claims 5 and 9

It is submitted that each of claims 4 and 9 is distinguishable over Voyer for the reasons set forth below.

Voyer discloses in paragraph [0004] that each mobile station SM_i sends a command signal TPC_i , which represents a request for an increase or a decrease of transmission power, and a base station receives the command signals TPC_1 to TPC_N sent by mobile stations SM_1 to SM_N . The base station modifies input signals e_1 to e_N in accordance with the requests of command signals TPC_1 to TPC_N .

Further, according to Voyer's abstract, summation units 15_1 to 15_K assign signals e_1 to e_N to groups 1 to K, after transmission power is controlled in accordance with command signals TPC_1 to TPC_N , and sum signals e_1 to e_N to generate sub-composite signals SC_1 to SC_K . Attenuation units 16_1 to 16_K attenuate the sub-composite signals SC_1 to SC_K by attenuation coefficients α_1 to α_K . Further, according to Voyer, the attenuation coefficients α_1 to α_K are made larger for correspondingly lower input signal priority levels.

Thus, Voyer only discloses controlling the transmission power of input signals e_1 to e_N in accordance with the requests of the command signals TPC_1 to TPC_N . Voyer does not disclose or suggest increasing a transmit power of the downlink common

channel when at least one of a plurality of TPC commands for a downlink common channel (i.e., the claimed first TPC commands) is a TPC command instructing an increase of the transmit power and decreasing the transmit power of the downlink common channel when all of the plurality of TPC commands for downlink common channel are TPC commands instructing a decrease of the transmit power, as recited in claims 5 and 9.

Accordingly, the Applicants submit that Voyer does not anticipate the subject matter of claims 5 and 9. Therefore, allowance of claims 5 and 9 is warranted.

Claims 6 and 10

It is submitted that each of claims 6 and 10 is distinguishable over Voyer for the reasons set forth below.

As described above, Voyer discloses in paragraph [0004] that each mobile station SM_i sends a command signal TPC_i , which represents a request for an increase or a decrease of transmission power, and a base station receives the command signals TPC_1 to TPC_N , sent by mobile stations SM_1 to SM_N , and modifies input signals e_1 to e_N in accordance with the requests of command signals TPC_1 to TPC_N . Further, as described above, summation units 15_1 to 15_N assign signals e_1 to e_N to groups 1 to K , after transmission power is controlled in accordance with the

requests of the command signals TPC_1 to TPC_N , and sum signals e_1 to e_N to generate sub-composite signals SC_1 to SC_K . Attenuation units 16_1 to 16_K attenuate the sub-composite signals SC_1 to SC_K by attenuation coefficients α_1 to α_K , in which attenuation coefficients α_1 to α_K are made larger for correspondingly lower input signal priority levels.

Voyer further discloses in paragraphs [0012], [0014], and [0015] that each maximum transmission power of the input signals e_1 to e_N is limited to predetermined value P_{i_max} . Thus, Voyer suggests limiting both the maximum transmission power of the downlink common channel signal and that of the downlink dedicated channel signal to a predetermined value P_{i_max} .

However, Voyer contains no disclosure or suggestion of controlling the transmission power of the downlink common channel in accordance with the transmission power of the downlink dedicated channel. More to the point, Voyer does not disclose or suggest the feature recited in claims 6 and 10 of controlling the transmit power of the downlink common channel at a transmit power equal to a maximum transmit power in a plurality of transmission powers of the downlink dedicated channels, after transmit power control, or at such maximum transmit power with an addition of an offset.

Accordingly, the Applicants submit that Voyer does not anticipate the subject matter of claims 6 and 10. Therefore, the rejection applied to claim 7 is obviated and allowance of claims 6, 7, and 10 is warranted.

Claims 8 and 11

It is submitted that each of claims 8 and 11 is distinguishable over Voyer for the reasons set forth below.

As described above, Voyer discloses in paragraph [0004] that each mobile station SM_1 sends a command signal TPC_1 , which represents a request for an increase or a decrease of the transmission power, and a base station receives the command signals TPC_1 to TPC_N sent by mobile stations SM_1 to SM_N and modifies input signals e_1 to e_N in accordance with the requests of command signals TPC_1 to TPC_N . That is, the command signals TPC_1 to TPC_N disclosed in Voyer only represent requests for an increase or a decrease of the transmission power, but do not represent the amount of increase and the amount of decrease of the transmission power.

Thus, Voyer contains no disclosure or suggestion of the features recited in claims 8 and 11 whereby a mobile station transmits a signal indicating the amount of increase of the transmit power of the downlink common channel to a base station,

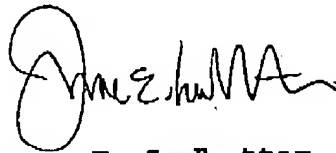
through an uplink dedicated channel or an uplink random access channel, and the base station increases a transmit power of the downlink common channel by the indicated amount of increase of the transmit power.

Accordingly, the Applicants submit that Voyer does not anticipate the subject matter of claims 8 and 11. Therefore, allowance of claims 8 and 11 is warranted.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,



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